

REMARKS

Claims 1- 16 are pending and stand rejected.

Claim 1 has been amended to make it even more clear that the core (I) results from the thermal decomposition of the corresponding alkoxyamine. This amendment is supported by page 6, lines 13 and 14 of the original Disclosure.

Claim 1 was further amended to cite that the composition contains no core-shell additives and no copper complexes. This is supported on page 5, line 10, and page 4, lines 25-28.

New claim 23 is supported by the examples.

Response to the Examiner's "Response to Arguments"

- 1) The Examiner states that Applicant's claims 1-3 do not require an alkoxyamine. Applicant has amended claim 1 to specifically state that the core (I) results from the thermal decomposition of an alkoxyamine – which would have been obvious to one of ordinary skill in the art, and the core (I) not being taught or suggested in the Akio reference.
- 2) The Akio reference uses an ATRP polymerization system, while Applicant uses alkoxyamine mediated initiation to achieve the block copolymer. Thus Akio does not teach or suggest Applicant's claims, as amended, having the core (I) derived from alkoxyamines. Additionally, the ATRP process requires a metal complex ([0059]). Applicant's Comparative Example 4 shows the deleterious effect of the metal complex causing darkening of the polymer. Thus the method of polymerization is important, and makes Applicant's claimed film superior to that of Akio. There is a big difference in the two controlled radical polymerization techniques. Not only is the residue of the different control agent different, but the ATRP process involves catalysis with copper complexes to synthesis the block copolymers. Unfortunately the copper complexes from the ATRP process are highly colored molecules that reduce the transparency of the resultant films. Applicant's claimed films do not have the color problems of block copolymers formed by the Akio ATRP process.

35 U.S.C. §103(a)

Claim 1-15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Akio et al (JP 2002194167 machine translation). The JP '167 reference describes a blend of a core-shell modified acrylic resin and an acrylic/methacrylic block copolymer. The block copolymer is formed by an atom transfer radical polymerization (ATRP) involving a copper complex that are detrimental to transparency and add undesirable color to the film.

Applicant's film is formed from a block copolymer made using an alkoxyamine. The core I of Applicant's claims comes from the scission of the alkoxyamines. Alkoxyamines are not taught or suggested by the JP '167 reference and therefore the core I required in Applicant's block copolymer core from the alkoxyamine scission is not taught or suggested by the JP '167 reference.

The JP '167 reference further teaches away from Applicant's claims by teaching a difference process for obtaining the block copolymers. The difference in process leads to the Akio film containing a metal complex (copper), and no alkoxyamine derived core. Further, the Akio film requires the blending of a block copolymer with a random acrylic polymer -requiring extra manufacturing steps.

The Examiner rejects claim 2, saying Applicant has chosen an inorganic radical, so the organic radical derived from alkoxyamine is no longer organic. Applicant notes that core I is an organic group, and Z is merely a polyfunctional radical attached to the organic group. Choosing Z as an inorganic group does not make organic core group I any less organic (organic being a carbon-based chemistry). Similarly the Akio reference to a zinc compound does not render claim 3 obvious, as the radical in claim 3 is still attached to an organic molecule.

For claim 4, as the Examiner notes the product by process claims only limit the structure – but that structure includes the core I of claim 1 which comes from the scission of the alkoxyamine – which is not taught or suggested by the JP '167 reference.

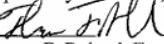
Claim 16 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Akio et al (JP 2002194167 machine translation) in view of Kim (US 6,689,441).

As stated above, the Akio reference fails to teach or suggest Applicant's claims. The Kim reference is a secondary reference, cited for its teaching of a multilayer film. As with the

Akio reference, the Kim reference also fails to teach or suggest a thermoformed film having a core (I) as claimed by Applicant. Thus the Kim reference fails to cure the defects of the Akio reference to teach or suggest all of Applicant's claim limitations.

Since the cited references fail to present a *prima facie* case of obviousness over the claims as amended, Applicant believes that the reasons for rejection have been overcome, and the claims herein should be allowable to the Applicant. Accordingly, reconsideration and allowance are requested.

Respectfully submitted,

  
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